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SHARP 21LF-90C SERVICE MANUAL

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SHARP

SERVICE MANUAL

SE0021LF90B00
Issued: 26th April 2006

AK-44 CHASSIS

PAL B/G / SECAM L/L', B/G, D/K SYSTEM COLOUR TELEVISION

MODEL 21LF-90C(B)

In the interests of user safety (required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

In order to service the model 21LF-90C(B), refer to the AK-44 Chassis Service Manual (SE00AK44CHA00).

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SHARP CORPORATION

This document has been published to be used for after sales service only.

SERVICE MANUAL UPDATE LOG SHEET

Technical Report No. Technical Bulletin No.	Cause / Solution	Part No.	Page No.	Application Data /Serial No.

Use this page to keep any special servicing information as Technical Report (Bulletin), Technical Information, etc.
If only part number changes are required, just change part number directly the part number in the Parts Listing Section.
If you need more information, please refer to the Technical Report (Bulletin).

ELECTRICAL SPECIFICATIONS

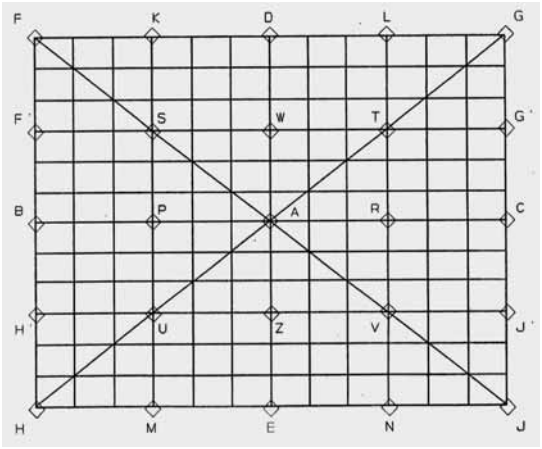
- Power Input ..... 220V-240 Volts AC 50 Hz

- Power Consumption
  - Normal Operation (Method IEC60107) ..... 62 W
  - Stand-by Operation ..... < 3 W

- Audio Power Output Rating (MPO) / Impedance
  - Internal Left Speaker ..... 4 W, 16 Ω
  - Internal Right Speaker ..... 4 W, 16 Ω

- Speakers
  - Speaker elliptic (2 pcs) ..... 50 x 120 mm

- Convergence (Maximum Misconvergence)



AREA	mm
A	0.3
BC	1.0
DE	1.0
FGHJ	1.3
KLMN	1.2
F'G'H'J'	1.2
STUV	1.1

- Picture Intermediate frequency
  - L' 33.9MHz
  - L, B/G, D/K 38.9MHz

- Sound Carrier Trap
  - L' 40.4MHz
  - L, D/K 32.4MHz
  - B/G 33.4MHz

- Adjacent Sound Carrier Trap
  - L' 32.4MHz
  - L, D/K, B/G 40.4MHz

- Adjacent Picture Carrier Trap
  - L' 41.9MHz
  - L, D/K 30.9MHz
  - B/G 31.9MHz

- Aerial Input Impedance
  - VHF/UHF ..... 75 ohm Unbalanced

- Tuning Ranges ..... 48.25MHz thru 855.25 MHz
  - VHF: S1 - S41 CH (Hyperband)
    E2 - E12 / F2 - F10
  - UHF: E21 - E69

- White Level

  Apply the rated voltage at the rated frequency to the TV set, while it is receiving full white pattern RF signal of 60 dB/μV from its RF input via the pattern generator.
  Turn all picture controls to maximum value. Measure the colour temperatures at the center of the screen by using the colour analyzer.

X=0.304 ± 0.015 Y=0.306 ± 0.015

Specifications are subject to change without prior notice.

MODEL DESTINATION (Operation Manual Languages)

21LF-90C(B): Czech, English, Hungarian, Polish, Romanian, Russian, Slovakian

WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis.
To prevent electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.

IMPORTANT SERVICING NOTES

Only qualified service personnel are allowed to carry out maintenance and repair of this receiver.

Servicing of High Voltage System and CRT

It is important that the static charge is removed from the high voltage system when carrying out work on the receiver. This can be achieved by connecting a 10K resistor (with a suitably insulated lead) from the CRT cavity connector to the CRT ground tag. This must be carried out with the AC supply disconnected from the receiver.

Note the following:

- The CRT in this receiver employs Integral Implosion Protection.
- If the CRT has to be changed it MUST be replaced with the correct type for continued safe working.
- DO NOT lift the CRT by its neck.
- When handing the CRT, ensure that shatterproof goggles are worn.
- Ensure that the CRT is discharge before handling.

X-Ray

This receiver is designed to keep any x-ray emission to an absolute minimum. Some fault conditions and servicing procedures may produce potentially hazardous x-ray radiation levels. This is a problem when in close proximity to the receiver for long periods of time. To reduce any risks associated with this, please observe the following precautions:

1. When undertaking any servicing on this chassis, DO NOT increase the EHT to more than 30.0 KV, (at a instantaneous beam current of 1300 μA).

2. Ensure that during normal operation the EHT does not exceed 25.55 KV (at a beam current of 1000 μA). This level has been preset in the factory. Always check that this level has not been exceeded after carrying out any repair on the receiver.

3. DO NOT replace the CRT with any other type than that specified in the parts listing as this may cause excessive x-ray radiation.

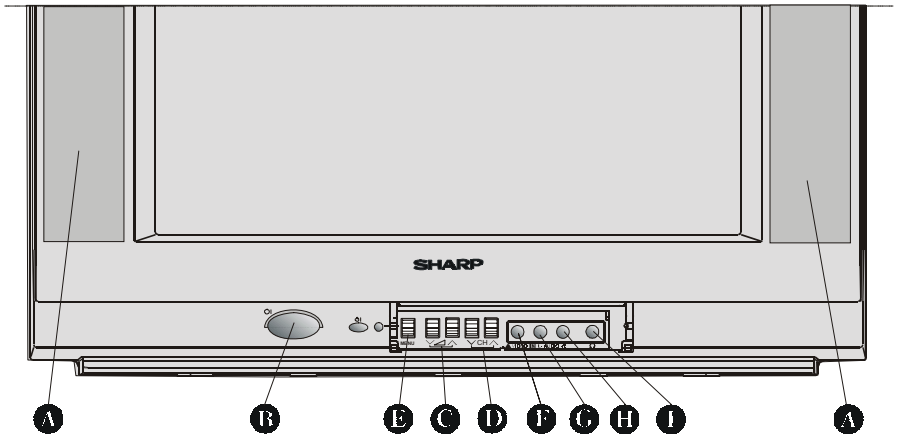
Before returning the receiver to the customer

In addition to the above checks, the following should also be carried out before returning the receiver to the customer.

1. Inspect all the leads to ensure that they are dressed correctly and that they are not obstructed or pinched by any other parts.

2. Ensure that all protective devices are in good condition. These will include nonmetallic control knobs, insulating fish papers, cabinets backs, compartment covers or shields, mechanical insulators, etc.

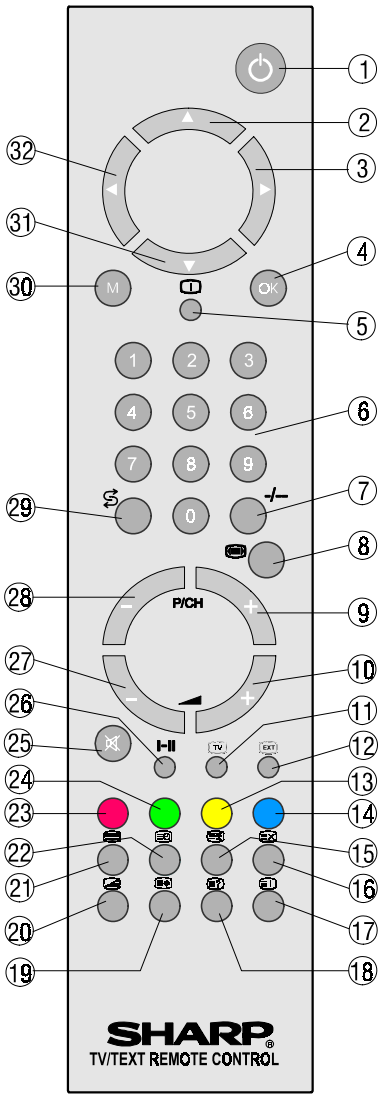
CONTROLS & TERMINALS



- Ⓐ Speakers (left + right)
- Ⓑ ⏻ = Power On / Off
- Ⓒ ∨ 🔊 ∧ = Volume -/+
- Ⓓ ∨ **CH** ∧ = Program -/+
- Ⓔ **MENU** = Menu
- Ⓕ **VIDEO** = VCR
- Ⓖ **AUDIO L** = Audio left
- Ⓗ **AUDIO R** = Audio right
- Ⓘ 🎧 = Headphone 3,6 mm Ø

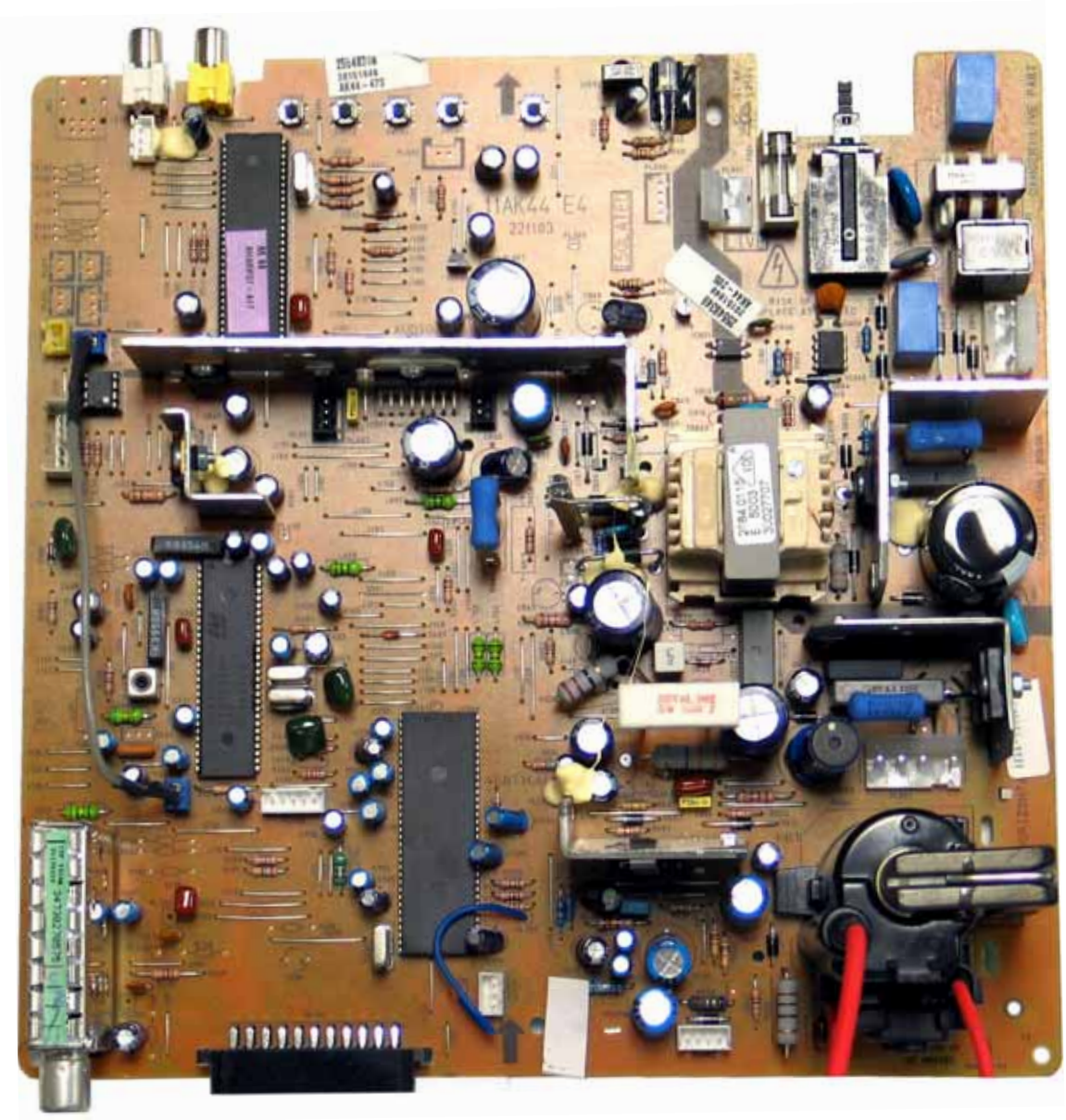
REMOTE CONTROL

① ⏻ = Stand By
② △ = Cursor Up
③ ▷ = Cursor Right
④ OK = OK
⑤ ⓘ = Info (Program Menu)
⑥ **0 - 9** = Direct Program
⑦ **-/--** = Double Digit
⑧ = Wide mode button
⑨ **P/CH+** = Program +
⑩ 🔊 **+** = Volume +
⑪ TV = TV / Quit Menu
⑫ EXT = EXT button
(**SCART, F- AV, RGB**)
⑬ **Yellow** = Feature Menu
⑭ **Blue** = Installation Menu
⑮ = Hold
⑯ = Update
⑰ = Index Page
⑱ = Reveal
⑲ = Expand
⑳ = Mix
㉑ = Teletext
㉒ = Time
㉓ **Red =** Sound Menu
㉔ **Green** = Picture Menu
㉕ = Mute
㉖ **I-II** = Mono/Stereo - Dual I-II
㉗ **-** 🔊 = - Volume
㉘ **- P/CH** = -Program
㉙ = Flash back button
㉚ **M** = Menu
㉛ ▽ = Cursor Down
㉜ ◁ = Cursor Left

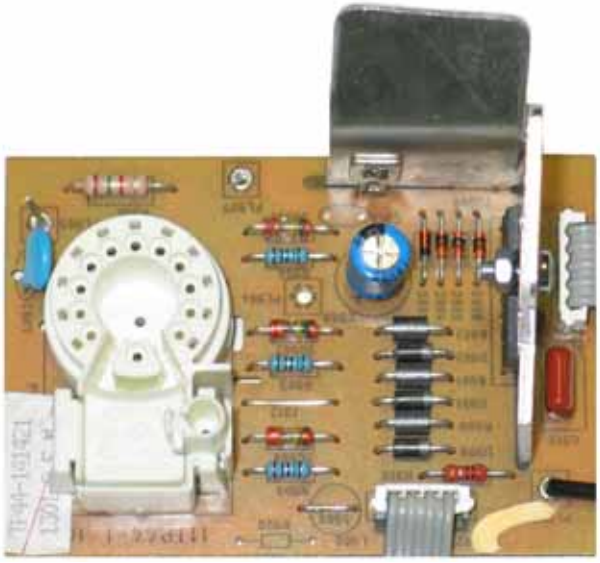


CHASSIS LAYOUT

Mother Unit



CRT Unit



Headphone Unit

PARTS LISTING

REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual. Electrical components having such features are identified by in the Replacement Parts Listing.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted.
Replacement parts not shown in this service manual may create shock fire, or other hazards.

HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.

1. MODEL NUMBER 2. REF. NO.
3. PART NO. (*) 4. DESCRIPTION
5. CODE 6. QUANTITY

(*) When ordering any part, a "V" should be added before the Part No.

	REF No.	(*) PARTS	DESCRIPTION	SN CODE	EX CODE
			PICTURE TUBE		
⚠		30017634	21" CRT TUBE SAFE EW FREE REALFLAT	BW	CQ
⚠		30042045	21 DEGCOIL&EARTH SAF	AH	AU
			TUNER		
	TU201	30033888	TUNER WSP (PLL) TECC2949PG40B RoHS	AM	AY
			INTEGRATED CIRCUITS		
	IC118	30001506	IC REG TL431C ADJ TO92 RoHS	AC	AH
	IC301	30011824	IC AAMP TDA7266 2*7W MULTIWATT15 ROHS	AF	AR
	IC403	30026922	IC TV PRO STV2248H SHRINK56 ROHS	AR	BC
	IC500	20250979	IC 24C08 U01425110310121201(ROHS)	AB	AF
	IC501	20170086	PR.IC.36/44-SHARP 36_44_B31	AS	BD
	IC502	30001669	PREAMPLIFIER TFMS1380 RoHS	AD	AM
	IC600	30015306	IC DEFLECTION TDA8174AW CLIPWATT11 RoHS	AD	AN
	IC700	30013658	IC SOUNDPRO MSP3410G SDIP64 ROHS	AS	BD
	IC800	30011968	IC SMPS MC44608 DIP8RoHS	AF	AQ
⚠	IC801	30015087	IC SAFE OPTOCOUPLER TCET1102G DIP4 RoHS	AA	AE
	IC803	30001500	IC REG LM7808 8V/1A TO220 ROHS	AC	AH
	IC804	30001622	IC REG 7805 5V/1A TO220 RoHS	AB	AF
	IC806	30014346	IC REG 78L05 5V/0.1A TO92 RoHS	AA	AE
	IC900	30025172	IC VAMP TDA6107JF/N3 DBS9MPF ROHS	AF	AQ
			TRANSISTORS		
	Q104	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q301	30001458	TR SMD NBJT BC858B 0.1A/30V SOT23 RoHS	AA	AB
	Q302	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q402	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q405	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q406	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q503	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q504	30001458	TR SMD NBJT BC858B 0.1A/30V SOT23 RoHS	AA	AB
	Q505	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q601	30013656	TR PBJT STX112-AP 2A/100V TO92 ROHS	AA	AE
	Q603	30001448	TR PBJT BU808DFI 8A/700V ISOWATT218 ROHS	AF	AQ
	Q604	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q606	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q607	30001458	TR SMD NBJT BC858B 0.1A/30V SOT23 RoHS	AA	AB
	Q700	30001458	TR SMD NBJT BC858B 0.1A/30V SOT23 RoHS	AA	AB
	Q801	30001386	TR NMOS MTP6N60E 6A/600V TO220 RoHS	AE	AP
	Q802	30001457	TR SMD PBJT BC848B 0.1A/30V SOT23 RoHS	AA	AC
	Q804	30001454	TR PBJT BC548B 0.1A/30V TO92 ROHS	AA	AC
			DIODES		
	D1	30003722	DIODE ZEN 15V 0.5W SOD27 ROHS	AA	AA
	D100	30002733	LED INFRARED IR333	AA	AC
	D101	30038502	DIODE SMD ZEN B5.1V SOD123 ROHS	AA	AA
	D102	30038502	DIODE SMD ZEN B5.1V SOD123 ROHS	AA	AA
	D103	30038502	DIODE SMD ZEN B5.1V SOD123 ROHS	AA	AA
	D104	30038476	DIODE SMD ZEN C12V SOD123 ROHS	AA	AA
	D105	30038502	DIODE SMD ZEN B5.1V SOD123 ROHS	AA	AA
	D106	30001377	DIODE ZENER 33V UZT 33B ROHS	AB	AF
	D107	30038502	DIODE SMD ZEN B5.1V SOD123 ROHS	AA	AA
	D108	30038480	DIODE SMD ZEN C5.6V SOD123 ROHS	AA	AA
	D109	30038480	DIODE SMD ZEN C5.6V SOD123 ROHS	AA	AA
	D110	30038476	DIODE SMD ZEN C12V SOD123 ROHS	AA	AA
	D111	30038476	DIODE SMD ZEN C12V SOD123 ROHS	AA	AA
	D113	30038476	DIODE SMD ZEN C12V SOD123 ROHS	AA	AA
	D115	30038476	DIODE SMD ZEN C12V SOD123 ROHS	AA	AA
	D121	30038480	DIODE SMD ZEN C5.6V SOD123 ROHS	AA	AA
	D3	30003722	DIODE ZEN 15V 0.5W SOD27 ROHS	AA	AA
	D300	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
	D301	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB

REF No.	PARTS	DESCRIPTION	SN CODE	EX CODE
D402	30012411	DIODE SMD BA782 35V SOD123 ROHS	AA	AD
D405	30038472	DIODE SMD ZEN C5.1V SOD123 ROHS	AA	AA
D407	30001284	DIODE 1N4148 0.15A/100V 0.5A SOD27 ROHS	AA	AB
D408	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D409	30038503	DIODE SMD ZEN B10V SOD123 ROHS	AA	AA
D410	30038503	DIODE SMD ZEN B10V SOD123 ROHS	AA	AA
D411	30038503	DIODE SMD ZEN B10V SOD123 ROHS	AA	AA
D501	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D505	30001284	DIODE 1N4148 0.15A/100V 0.5A SOD27 ROHS	AA	AB
D506	30001284	DIODE 1N4148 0.15A/100V 0.5A SOD27 ROHS	AA	AB
D509	30001279	LED RED/GREEN LTL293SJ RoHS	AC	AH
D509	40017873	LED HOLDER (SHARP)	AA	AC
D512	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D602	30001329	DIODE 1N4007 1A/1000V 30A DO204 ROHS	AA	AB
D603	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D608	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D609	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D610	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D611	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D614	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D615	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D616	30038476	DIODE SMD ZEN C12V SOD123 ROHS	AA	AA
D617	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D618	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D619	30038476	DIODE SMD ZEN C12V SOD123 ROHS	AA	AA
D620	30001349	DIODE ZEN 11V 0.5W SOD27 RoHS	AA	AB
D621	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D622	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D623	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D700	30001285	DIODE SMD 1N4148 0.2A/75V ROHS	AA	AB
D701	30001369	DIODE ZEN 3.6V 0.5W SOD27 RoHS	AA	AB
D800	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D801	30001347	DIODE ZEN 8.2V 0.5W SOD27 ROHS	AA	AB
D802	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D803	30001315	DIODE BYD33D 1A/200V 20A ROHS	AA	AE
D804	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D805	30009366	DIODE UF5402 3A/200V 150A DO201AD RoHS	AB	AF
D806	30001315	DIODE BYD33D 1A/200V 20A ROHS	AA	AE
D808	30007681	DIODE UF5407 3A/800V 150A SOD64 RoHS	AB	AF
D809	30001329	DIODE 1N4007 1A/1000V 30A DO204 ROHS	AA	AB
D810	20128663	HE.ASY.45-DIODE UF5402(U)(AK30A10)	AA	AE
D811	30001329	DIODE 1N4007 1A/1000V 30A DO204 ROHS	AA	AB
D813	30001329	DIODE 1N4007 1A/1000V 30A DO204 ROHS	AA	AB
D837	30001329	DIODE 1N4007 1A/1000V 30A DO204 ROHS	AA	AB
D838	30001329	DIODE 1N4007 1A/1000V 30A DO204 ROHS	AA	AB
D889	30001384	TR SCR MCR22-8 1.5A/600V TO92 ROHS	AB	AG
D890	30001329	DIODE 1N4007 1A/1000V 30A DO204 ROHS	AA	AB
D891		JUMPER WIRE		
D893	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D894	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D900	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D901	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D902	30001318	DIODE BA159 1A/800V 20A ROHS	AA	AB
D903	30001344	DIODE ZEN 6.2V 1/2W SOD27 ROHS	AA	AB
D904	30001349	DIODE ZEN 11V 0.5W SOD27 RoHS	AA	AB
D905	30001349	DIODE ZEN 11V 0.5W SOD27 RoHS	AA	AB
D906	30001349	DIODE ZEN 11V 0.5W SOD27 RoHS	AA	AB
		PACKAGED CIRCUITS		
X401	30001749	XTAL 4.433619 Series HC49U ROHS	AC	AK
X402	30015592	XTAL 3.579545 (WO/LOAD CAP) ROHS	AB	AG
X403	30000074	CAP MKT 100NF 63V J RoHS	AA	AC
X501	30002851	XTAL 4.000 30p HC49U ROHS	AC	AH
X700	30001756	XTAL 18.432 12p HC49U ROHS	AE	AP
		COILS		
L1	30001996	FIXEDCOIL AXI22uH410mAQ60K0.84R4x9.8RoHS	AA	AB
L101	30013412	FERRITE SMD1.5K/100MHz200mA0.4R(805)RoHS	AA	AA
L110	30013412	FERRITE SMD1.5K/100MHz200mA0.4R(805)RoHS	AA	AA
L111	30013412	FERRITE SMD1.5K/100MHz200mA0.4R(805)RoHS	AA	AA
L112	30013412	FERRITE SMD1.5K/100MHz200mA0.4R(805)RoHS	AA	AA
L113	30013412	FERRITE SMD1.5K/100MHz200mA0.4R(805)RoHS	AA	AA
L114	30013412	FERRITE SMD1.5K/100MHz200mA0.4R(805)RoHS	AA	AA
L117	30001734	JUMPER SMD (0805) ROHS	AA	AB
L2	30001996	FIXEDCOIL AXI22uH410mAQ60K0.84R4x9.8RoHS	AA	AB
L201	30001979	FIXEDCOIL AXI 1uH920mAQ45M0.19R4x9.8ROHS	AA	AB
L210	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD
L211	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD
L401	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD
L402	30001992	FIXEDCOIL AXI10uH500mAQ85K0.58R4x9.8ROHS	AA	AB
L403	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD

	REF No.	PARTS	DESCRIPTION	SN CODE	EX CODE
	L404	30001990	FIXEDCOILAXI6.8uH550mAQ75K0.48R4x9.8ROHS	AA	AB
	L405	30026042	ADJ.COIL VIF 44MHZ Q=64 C=39pF RoHS	AA	AD
	L406	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD
	L407	30002002	FIXEDCOIL AXI47uH340mAQ60K1.22R4x9.8RoHS	AA	AB
	L603	30018501	LINEARITY COIL 100UH RoHS	AB	AG
	L700	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD
	L701	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD
	L702	30001996	FIXEDCOIL AXI22uH410mAQ60K0.84R4x9.8RoHS	AA	AB
	L703	30001979	FIXEDCOIL AXI 1uH920mAQ45M0.19R4x9.8ROHS	AA	AB
	L704	30001979	FIXEDCOIL AXI 1uH920mAQ45M0.19R4x9.8ROHS	AA	AB
	L802	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD
	L803	30000607	RES CF 1/4W 2.2R J. ROHS	AA	AB
	L805	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD
	L806	30001971	FERRITE SMD600R/100MHz200mA1.1R(805)ROHS	AA	AD
	L807	30001992	FIXEDCOIL AXI10uH500mAQ85K0.58R4x9.8ROHS	AA	AB
	L808		JUMPER WIRE	--	--
	L809	30001734	JUMPER SMD (0805) ROHS	AA	AB
	L811	30001734	JUMPER SMD (0805) ROHS	AA	AB
			CERAMIC FILTERS		
	Z401	30012545	FILTER SAW K9656M ROHS	AG	AR
	Z402	30014261	FILTER SAW K3958M ROHS	AF	AR
	Z404	30001724	FILTER SER TRAP TPS 5.5MHZ ROHS	AB	AF
			TRANSFORMERS		
⚠	TR601	30017788	TRF FBT SAFE 90(AK30-36 LAYER TYPE)RoHS	AT	BE
⚠	TR801	30031103	LINE FILTER SAFE 2x27mH RoHS	AA	AE
⚠	TR802	30027707	TRF SMPS SAFE AK44 RF 170-270VAu=14VRoHS	AF	AQ
			CAPACITORS		
	C143	30012583	CAP SMD 1.5NF 50V K (0603) ROHS	AA	AA
	C144	30012583	CAP SMD 1.5NF 50V K (0603) ROHS	AA	AA
	C155	30012560	CAP SMD 100PF 50V J (0603) ROHS	AA	AB
	C157	30012560	CAP SMD 100PF 50V J (0603) ROHS	AA	AB
	C201	30000400	CAP EL 47UF 50V M ROHS	AA	AB
	C202	30012985	JUMPER SMD 0603 ROHS	AA	AB
	C205	30000371	CAP EL 22UF 50V M ROHS	AA	AB
	C206	30012610	CAP SMD 10NF 50V J (0603) ROHS	AA	AB
	C207	30012610	CAP SMD 10NF 50V J (0603) ROHS	AA	AB
	C3	30000283	CAP CER 1NF 50V K B ROHS	AA	AB
	C300	30000400	CAP EL 47UF 50V M ROHS	AA	AB
	C302	30000092	CAP MKT 220NF 63V J ROHS	AA	AD
	C305	30000092	CAP MKT 220NF 63V J ROHS	AA	AD
	C404	30000225	CAP CER 220PF 50V J SL ROHS	AA	AB
	C408	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C409	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C410	30000384	CAP EL 2.2UF 50V M ROHS	AA	AB
	C411	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C412	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C413	30000362	CAP EL 1UF 50V M. ROHS	AA	AB
	C414	30012585	CAP SMD 2.2NF 50V K R (0603) ROHS	AA	AB
	C415	30012581	CAP SMD 1NF 50V K R (0603) ROHS	AA	AB
	C416	30000362	CAP EL 1UF 50V M. ROHS	AA	AB
	C417	30000362	CAP EL 1UF 50V M. ROHS	AA	AB
	C418	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C419	30000413	CAP EL 4.7UF 50V M ROHS	AA	AB
	C420	30000100	CAP MKT 330NF 63V J ROHS	AA	AD
	C422	30000400	CAP EL 47UF 50V M ROHS	AA	AB
	C423	30000400	CAP EL 47UF 50V M ROHS	AA	AB
	C424	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C425	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C426	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C427	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C429	30012589	CAP SMD 4.7NF 50V K (0603) ROHS	AA	AB
	C431	30000362	CAP EL 1UF 50V M. ROHS	AA	AB
	C432	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C433	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C434	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C435	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C436	30000109	CAP MKT 470NF 63V J ROHS	AA	AD
	C437	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C438	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C439	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C440	30000074	CAP MKT 100NF 63V J RoHS	AA	AC
	C442	30000362	CAP EL 1UF 50V M. ROHS	AA	AB
	C443	30000362	CAP EL 1UF 50V M. ROHS	AA	AB
	C444	30000384	CAP EL 2.2UF 50V M ROHS	AA	AB
	C446	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C448	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C449	30012567	CAP SMD 220PF 50V J (0603) ROHS	AA	AB
	C451	30012585	CAP SMD 2.2NF 50V K R (0603) ROHS	AA	AB

	REF No.	PARTS	DESCRIPTION	SN CODE	EX CODE
	C452	30012585	CAP SMD 2.2NF 50V K R (0603) ROHS	AA	AB
	C453	30012581	CAP SMD 1NF 50V K R (0603) ROHS	AA	AB
	C454	30012573	CAP SMD 47PF 50V J (0603) ROHS	AA	AB
	C455	30012573	CAP SMD 47PF 50V J (0603) ROHS	AA	AB
	C456	30012573	CAP SMD 47PF 50V J (0603) ROHS	AA	AB
	C459	30012575	CAP SMD 4.7PF 50V C CH (0603) ROHS	AA	AA
	C460	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C502	30000396	CAP EL 47UF 16V M ROHS	AA	AB
	C504	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C505	30012589	CAP SMD 4.7NF 50V K (0603) ROHS	AA	AB
	C510	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C511	30012566	CAP SMD 22PF 50V J (0603) ROHS	AA	AB
	C513	30000371	CAP EL 22UF 50V M ROHS	AA	AB
	C514	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C515	30012579	CAP SMD 82PF 50V J (0603) ROHS	AA	AB
	C517	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C518	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C519	30000352	CAP EL 100UF 16V M ROHS	AA	AB
	C520	30012560	CAP SMD 100PF 50V J (0603) ROHS	AA	AB
	C521	30012562	CAP SMD 15PF 50V J (0603) ROHS	AA	AA
	C522	30012562	CAP SMD 15PF 50V J (0603) ROHS	AA	AA
	C523	30012585	CAP SMD 2.2NF 50V K R (0603) ROHS	AA	AB
	C524	30012985	JUMPER SMD 0603 ROHS	AA	AB
	C525	30012566	CAP SMD 22PF 50V J (0603) ROHS	AA	AB
	C530	30012589	CAP SMD 4.7NF 50V K (0603) ROHS	AA	AB
	C531	30000384	CAP EL 2.2UF 50V M ROHS	AA	AB
	C532	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C536	30000074	CAP MKT 100NF 63V J RoHS	AA	AC
	C541	30000109	CAP MKT 470NF 63V J ROHS	AA	AD
	C542	30000205	CAP CER 150PF 50V J SL ROHS	AA	AB
	C543	30000205	CAP CER 150PF 50V J SL ROHS	AA	AB
	C545	30012607	CAP SMD 150PF 50V J (0603) ROHS	AA	AA
	C546	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C548	30012603	CAP SMD 100NF 25V K R (0603) ROHS	AA	AB
	C603	30000384	CAP EL 2.2UF 50V M ROHS	AA	AB
	C604	30000400	CAP EL 47UF 50V M ROHS	AA	AB
	C608	30000107	CAP MKT 47NF 250V J RoHS	AA	AD
	C610	30018901	CAP EL 100UF 50V M 105° ROHS	AA	AB
	C611	30000092	CAP MKT 220NF 63V J ROHS	AA	AD
	C613	30000078	CAP MKT 1UF 100V M ROHS	AB	AF
	C615	30000359	CAP EL 1000UF 16V M ROHS	AA	AC
	C616	30000400	CAP EL 47UF 50V M ROHS	AA	AB
⚠	C618	30000134	CAPMKPSAFE11NF2000Vdc/1700Vpp%3.5RRoHS	AC	AH
	C619	30000131	CAP MKP SAFE 100NF 250V J RoHS	AA	AB
	C623	30029182	CAP EL 100UF 250V M W LONG LEAD RoHS	AB	AF
	C624	30000350	CAP EL 10UF 250V M. ROHS	AA	AD
⚠	C627	30006750	CAP MKP 220NF 400V J ROHS	AA	AD
	C628	30018380	CAP EL 3.3UF 160V M 105° ROHS	AA	AB
	C631	30000410	CAP EL 470UF 50V M. ROHS	AB	AF
	C632	30000100	CAP MKT 330NF 63V J ROHS	AA	AD
	C634	30000409	CAP EL 470UF 25V ROHS	AA	AD
	C635	30000100	CAP MKT 330NF 63V J ROHS	AA	AD
	C636	30000400	CAP EL 47UF 50V M ROHS	AA	AB
	C638	30012581	CAP SMD 1NF 50V K R (0603) ROHS	AA	AB
	C641	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C642	30012609	CAP SMD 68NF 50V K (0603) ROHS	AA	AB
	C643	30000116	CAP MKT 68NF 63V J ROHS	AA	AC
	C644	30000362	CAP EL 1UF 50V M. ROHS	AA	AB
	C700	30012565	CAP SMD 1.8PF 50V J CH (0603) ROHS	AA	AA
	C701	30012565	CAP SMD 1.8PF 50V J CH (0603) ROHS	AA	AA
	C702	30012573	CAP SMD 47PF 50V J (0603) ROHS	AA	AB
	C703	30012573	CAP SMD 47PF 50V J (0603) ROHS	AA	AB
	C705	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C706	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C707	30012573	CAP SMD 47PF 50V J (0603) ROHS	AA	AB
	C708	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C710	30012573	CAP SMD 47PF 50V J (0603) ROHS	AA	AB
	C712	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C713	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C714	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C716	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C719	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C720	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C721	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C723	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C724	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C729	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C730	30000393	CAP EL 3.3UF 50V M ROHS	AA	AB
	C733	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C734	30000345	CAP EL 10UF 50V M ROHS	AA	AB

	REF No.	PARTS	DESCRIPTION	SN CODE	EX CODE
	C735	30012586	CAP SMD 22NF 50V K (0603) ROHS	AA	AB
	C736	30000345	CAP EL 10UF 50V M ROHS	AA	AB
	C737	30000371	CAP EL 22UF 50V M ROHS	AA	AB
	C738	30000371	CAP EL 22UF 50V M ROHS	AA	AB
	C741	30012581	CAP SMD 1NF 50V K R (0603) ROHS	AA	AB
	C742	30012581	CAP SMD 1NF 50V K R (0603) ROHS	AA	AB
	C748	30012560	CAP SMD 100PF 50V J (0603) ROHS	AA	AB
⚠	C801	30000094	CAP MKT SAFE 220NF 275V M AC RoHS	AA	AB
⚠	C802	30000094	CAP MKT SAFE 220NF 275V M AC RoHS	AA	AB
	C803	30000433	CAP CER 1NF 1KV M B ROHS	AA	AB
	C805	30018085	CAP VAR SAFE 510V K MFCN14D511 RoHS	AA	AD
	C806	30000433	CAP CER 1NF 1KV M B ROHS	AA	AB
	C808	30000295	CAP CER 100NF 50V Z F ROHS	AA	AB
	C809	30000420	CAP EL 150UF 400V M. ROHS	AF	AQ
	C810	30000387	CAP EL 33UF 50V M ROHS	AA	AB
⚠	C811	30000161	CAP MKP SAFE 47NF 630Vdc / 622Vpp J ROHS	AB	AE
	C813	30000295	CAP CER 100NF 50V Z F ROHS	AA	AB
⚠	C816	30000440	CAP CER SAFE 2.2NF 4KV M RoHS	AA	AC
	C817	30000198	CAP CER 120PF 500V J SL ROHS	AA	AB
	C818	30016654	CAP SMD 100NF 16V K R (0603) ROHS	AA	AB
	C819	30012609	CAP SMD 68NF 50V K (0603) ROHS	AA	AB
	C822	30007308	CAP CER 220PF 1KV K (PULSE) ROHS	AA	AD
	C824	30009208	CAP CER 470PF 1KV K (PULSE) ROHS	AA	AC
	C826	30029182	CAP EL 100UF 250V M W LONG LEAD RoHS	AB	AF
	C827	30000411	CAP EL 4700UF 16V M ROHS	AC	AH
	C828	30000295	CAP CER 100NF 50V Z F ROHS	AA	AB
	C829	30000359	CAP EL 1000UF 16V M ROHS	AA	AC
	C830	30000382	CAP EL 2200UF 16V M ROHS	AB	AF
	C832	30000295	CAP CER 100NF 50V Z F ROHS	AA	AB
	C833	30000407	CAP EL 470UF 16V M. ROHS	AA	AC
	C834	30000295	CAP CER 100NF 50V Z F ROHS	AA	AB
	C836	30000431	CAP CER 100PF 1KV M RoHS	AA	AC
	C838	30000352	CAP EL 100UF 16V M ROHS	AA	AB
	C839	30000352	CAP EL 100UF 16V M ROHS	AA	AB
	C840	30000352	CAP EL 100UF 16V M ROHS	AA	AB
	C843	30000431	CAP CER 100PF 1KV M RoHS	AA	AC
	C848	30000352	CAP EL 100UF 16V M ROHS	AA	AB
	C849	30000352	CAP EL 100UF 16V M ROHS	AA	AB
	C850	30000352	CAP EL 100UF 16V M ROHS	AA	AB
	C855	30000407	CAP EL 470UF 16V M. ROHS	AA	AC
	C857	30012573	CAP SMD 47PF 50V J (0603) ROHS	AA	AB
	C859	30013533	CAP CER 100PF 1KV K (PULSE) ROHS	AA	AC
	C862	30000367	CAP EL 1UF 250V M ROHS	AA	AB
⚠	C864	30000440	CAP CER SAFE 2.2NF 4KV M RoHS	AA	AC
	C907	30000434	CAP CER 1NF 2KV K B ROHS	AA	AB
	C908	30000415	CAP EL 4.7UF 250V M ROHS	AA	AC
	C912	30000075	CAP MKT 100NF 250V K (DC) ROHS	AA	AD
			RESISTORS		
	R1	30000492	RES CF 1/4W 120R J. ROHS	AA	AA
	R105	30000792	RES CF 1/4W 75R J ROHS	AA	AB
	R109	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R110	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R113	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R114	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R115	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R116	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R117	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R118	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R123	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R126	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R127	30000459	RES CF 1/4W 100R J. ROHS	AA	AB
	R129	30012713	RES SMD 1/16W 75R J (0603) ROHS	AA	AB
	R135	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R153	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R2	30000492	RES CF 1/4W 120R J. ROHS	AA	AA
	R201	30012674	RES SMD 1/16W 27K J (0603) RoHS	AA	AB
	R202	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R204	30000459	RES CF 1/4W 100R J. ROHS	AA	AB
	R206	30000459	RES CF 1/4W 100R J. ROHS	AA	AB
	R301	30000471	RES CF 1/4W 10K J ROHS	AA	AB
	R302	30000471	RES CF 1/4W 10K J ROHS	AA	AB
	R303	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R305	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R306	30012509	RES SMD 1/16W 100K J (0603) ROHS	AA	AB
	R407	30000590	RES CF 1/4W 2.2K J. ROHS	AA	AB
	R410	30000590	RES CF 1/4W 2.2K J. ROHS	AA	AB
	R412	30012696	RES SMD 1/16W 47K J (0603) ROHS	AA	AB
	R417	30012510	RES SMD 1/16W 100R J (0603) ROHS	AA	AB
	R418	30012510	RES SMD 1/16W 100R J (0603) ROHS	AA	AB

	REF No.	PARTS	DESCRIPTION	SN CODE	EX CODE
	R419	30012649	RES SMD 1/16W 150R J (0603) ROHS	AA	AB
	R420	30000466	RES CF 1/4W 1K J ROHS	AA	AB
	R421	30012650	RES SMD 1/16W 15K J (0603) ROHS	AA	AB
	R422	30012659	RES SMD 1/16W 2.2K J (0603) ROHS	AA	AB
	R423	30012712	RES SMD 1/16W 8.2K J (0603) RoHS	AA	AB
	R424	30000712	RES CF 1/4W 470R J RoHS	AA	AB
	R425	30012668	RES SMD 1/16W 220R J (0603) ROHS	AA	AA
	R426	30012659	RES SMD 1/16W 2.2K J (0603) ROHS	AA	AB
	R427	30012674	RES SMD 1/16W 27K J (0603) RoHS	AA	AB
	R428	30000792	RES CF 1/4W 75R J ROHS	AA	AB
	R431	30012674	RES SMD 1/16W 27K J (0603) RoHS	AA	AB
	R432	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R433	30012667	RES SMD 1/16W 220K J (0603) ROHS	AA	AB
	R437	30000466	RES CF 1/4W 1K J ROHS	AA	AB
	R438	30000466	RES CF 1/4W 1K J ROHS	AA	AB
	R439	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R440	30012714	RES SMD 1/16W 820R J (0603) ROHS	AA	AA
	R441	30012656	RES SMD 1/16W 18K J (0603) ROHS	AA	AB
	R442	30000466	RES CF 1/4W 1K J ROHS	AA	AB
	R446	30012714	RES SMD 1/16W 820R J (0603) ROHS	AA	AA
	R447	30012714	RES SMD 1/16W 820R J (0603) ROHS	AA	AA
	R448	30012683	RES SMD 1/16W 330K J (0603) ROHS	AA	AB
	R449	30012662	RES SMD 1/16W 2.7K J (0603) ROHS	AA	AB
	R450	30000712	RES CF 1/4W 470R J RoHS	AA	AB
	R455	30012665	RES SMD 1/16W 20K J (0603) ROHS	AA	AB
	R458	30012662	RES SMD 1/16W 2.7K J (0603) ROHS	AA	AB
	R459	30012510	RES SMD 1/16W 100R J (0603) ROHS	AA	AB
	R460	30012510	RES SMD 1/16W 100R J (0603) ROHS	AA	AB
	R461	30012510	RES SMD 1/16W 100R J (0603) ROHS	AA	AB
	R463	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R464	30012665	RES SMD 1/16W 20K J (0603) ROHS	AA	AB
	R465	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R467	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R468	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R469	30000670	RES CF 1/4W 330K J. ROHS	AA	AB
	R470	30012683	RES SMD 1/16W 330K J (0603) ROHS	AA	AB
	R474	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R475	30012510	RES SMD 1/16W 100R J (0603) ROHS	AA	AB
	R476	30012707	RES SMD 1/16W 680R J (0603) ROHS	AA	AB
	R477	30014022	RES SMD 1/16W 47R J (0603) ROHS	AA	AA
	R502	30012695	RES SMD 1/16W 470R J (0603) ROHS	AA	AB
	R503	30012707	RES SMD 1/16W 680R J (0603) ROHS	AA	AB
	R504	30012679	RES SMD 1/16W 3.9K J (0603) ROHS	AA	AB
	R505	30012673	RES SMD 1/16W 270R J (0603) ROHS	AA	AB
	R506	30012506	RES SMD 1/16W 1.5K J (0603) ROHS	AA	AB
	R507	30000466	RES CF 1/4W 1K J ROHS	AA	AB
	R508	30000622	RES CF 1/4W 270R J RoHS	AA	AB
	R509	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R510	30000737	RES CF 1/4W 5.1K J ROHS	AA	AB
	R511	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R512	30012504	RES SMD 1/16W 1.2K J (0603) ROHS	AA	AB
	R513	30000459	RES CF 1/4W 100R J. ROHS	AA	AB
	R514	30000459	RES CF 1/4W 100R J. ROHS	AA	AB
	R515	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R516	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R517	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R518	30000471	RES CF 1/4W 10K J ROHS	AA	AB
	R519	30012698	RES SMD 1/16W 5.6K J (0603) ROHS	AA	AB
	R525	30000583	RES CF 1/4W 220R J ROHS	AA	AB
	R526	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R527	30000718	RES CF 1/4W 4.7K J ROHS	AA	AB
	R528	30012698	RES SMD 1/16W 5.6K J (0603) ROHS	AA	AB
	R530	30012698	RES SMD 1/16W 5.6K J (0603) ROHS	AA	AB
	R532	30012659	RES SMD 1/16W 2.2K J (0603) ROHS	AA	AB
	R533	30012644	RES SMD 1/16W 12K J (0603) ROHS	AA	AB
	R534	30000526	RES CF 1/4W 1.5K J ROHS	AA	AB
	R535	30000718	RES CF 1/4W 4.7K J ROHS	AA	AB
	R536	30000471	RES CF 1/4W 10K J ROHS	AA	AB
	R537	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R545	30012644	RES SMD 1/16W 12K J (0603) ROHS	AA	AB
	R546	30000560	RES CF 1/4W 1.8K J ROHS	AA	AB
	R547	30012659	RES SMD 1/16W 2.2K J (0603) ROHS	AA	AB
	R548	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R552	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R555	30012659	RES SMD 1/16W 2.2K J (0603) ROHS	AA	AB
	R556	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R559	30000470	RES CF 1/2W 10K J ROHS	AA	AA
	R560	30012669	RES SMD 1/16W 22K J (0603) ROHS	AA	AB
	R561	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R562	30000471	RES CF 1/4W 10K J ROHS	AA	AB

	REF No.	PARTS	DESCRIPTION	SN CODE	EX CODE
	R564	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R565	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R601	30000752	RES CF 1/4W 56K J RoHS	AA	AB
	R602	30000820	RES CF 1/4W 82K J ROHS	AA	AB
	R605	30000504	RES CF 1/4W 120K J ROHS	AA	AB
	R612	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R613	30012692	RES SMD 1/16W 4.7K J (0603) ROHS	AA	AB
	R618	30012508	RES SMD 1/16W 1.8K J (0603) ROHS	AA	AB
	R619	30012705	RES SMD 1/16W 6.8K J (0603) ROHS	AA	AB
	R623	30000607	RES CF 1/4W 2.2R J. ROHS	AA	AB
	R624	30001120	RES MO 2W 22R J ROHS	AA	AB
	R625	30000900	RES MF 1/4W 1.8K J ROHS	AA	AB
	R627	30000642	RES CF 1/2W 2.7R J ROHS	AA	AB
	R628		JUMPER WIRE	--	--
	R630	30000828	RES CF 1/4W 8.2M J ROHS	AA	AB
	R631	30000885	RES MF 1/4W 1.5K J ROHS	AA	AB
	R633	30000650	RES CF 1/4W 33R J. ROHS	AA	AB
	R634	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R637	30000621	RES CF 1/2W 270R J ROHS	AA	AB
	R638	30000589	RES CF 1/2W 2.2K J ROHS	AA	AA
	R639	30000718	RES CF 1/4W 4.7K J ROHS	AA	AB
	R640	30012662	RES SMD 1/16W 2.7K J (0603) ROHS	AA	AB
	R641	30012649	RES SMD 1/16W 150R J (0603) ROHS	AA	AB
	R645	30018904	RES MO 5W 4.7K J (RADIAL) RoHS	AA	AD
	R646	30014941	RES CF 1/4W 16K J ROHS	AA	AA
	R647	30000466	RES CF 1/4W 1K J ROHS	AA	AB
⚠	R648	30001216	RES FUSE SAFE 1W 1.2R J ROHS	AA	AA
	R649	30014941	RES CF 1/4W 16K J ROHS	AA	AA
	R650	30000744	RES CF 1/4W 560R J ROHS	AA	AB
	R654	30000458	RES CF 1/2W 100R J ROHS	AA	AB
	R655	30000705	RES CF 1/2W 47R J. ROHS	AA	AB
	R657	30012656	RES SMD 1/16W 18K J (0603) ROHS	AA	AB
	R659	30001151	RES MO 3W 330R J ROHS	AA	AD
	R660	30012669	RES SMD 1/16W 22K J (0603) ROHS	AA	AB
	R661	30012674	RES SMD 1/16W 27K J (0603) RoHS	AA	AB
	R662	30000712	RES CF 1/4W 470R J RoHS	AA	AB
	R663	30000459	RES CF 1/4W 100R J. ROHS	AA	AB
	R664	30007779	RES MO 5W 47R J(RADIAL) ROHS	AA	AC
	R665	30012708	RES SMD 1/16W 68K J (0603) ROHS	AA	AA
	R666	30001077	RES MO 2W 10R J ROHS	AA	AC
	R667	30012659	RES SMD 1/16W 2.2K J (0603) ROHS	AA	AB
	R668	30012641	RES SMD 1/16W 10K J (0603) ROHS	AA	AB
	R669	30012659	RES SMD 1/16W 2.2K J (0603) ROHS	AA	AB
	R701	30000459	RES CF 1/4W 100R J. ROHS	AA	AB
	R703	30000459	RES CF 1/4W 100R J. ROHS	AA	AB
	R705	30000459	RES CF 1/4W 100R J. ROHS	AA	AB
	R715	30012695	RES SMD 1/16W 470R J (0603) ROHS	AA	AB
	R717	30012695	RES SMD 1/16W 470R J (0603) ROHS	AA	AB
	R719	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R721	30012510	RES SMD 1/16W 100R J (0603) ROHS	AA	AB
	R722	30012510	RES SMD 1/16W 100R J (0603) ROHS	AA	AB
	R725	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R726	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R727	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R730	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R731	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R801	30000982	RES MF 1/4W 4.7K J ROHS	AA	AA
	R803	30012659	RES SMD 1/16W 2.2K J (0603) ROHS	AA	AB
	R804	30000504	RES CF 1/4W 120K J ROHS	AA	AB
	R805	30000843	RES MF 1/4W 10R J ROHS	AA	AB
	R806	30000982	RES MF 1/4W 4.7K J ROHS	AA	AA
	R807	30001159	RES MO 1W 0.33R J ROHS	AA	AB
	R809	30007784	RES MO 5W 33K J(RADIAL) ROHS	AA	AD
⚠	R810	30001257	RES MG SAFE 1/2W 4.7M J ROHS	AA	AD
	R811	30000594	RES CF 1/4W 22K J. ROHS	AA	AB
	R813	30000718	RES CF 1/4W 4.7K J ROHS	AA	AB
	R814	30000588	RES SMD 1/10W 220R J 0805 ROHS	AA	AB
	R815	30000452	RES CF 1/4W 10R J. ROHS	AA	AB
	R817	30001037	RES MF 1/4W 99K F ROHS	AA	AB
	R818	30006463	RES MF 1/4W 2K F ROHS	AA	AA
	R819	30000809	RES CF 1/2W 820R J ROHS	AA	AA
	R821	30000470	RES CF 1/2W 10K J ROHS	AA	AA
	R828	30001265	NTC SAFE MONITOR 10R/3A SCK-103 RoHS	AA	AB
	R829	30000718	RES CF 1/4W 4.7K J ROHS	AA	AB
	R830	30012657	RES SMD 1/16W 1K J (0603) ROHS	AA	AB
	R831	30012669	RES SMD 1/16W 22K J (0603) ROHS	AA	AB
	R833	30012985	JUMPER SMD 0603 ROHS	AA	AB
	R835	20153236	CN.ASY.44-RES WW 5W 5.6R J RAD+35006011	AB	AF
⚠	R836	30001224	RES FUSE SAFE 1/2W 0.22R J ROHS	AA	AB
	R838	30000631	RES SMD 1/10W 2.7K J 0805 ROHS	AA	AB

	REF No.	PARTS	DESCRIPTION	SN CODE	EX CODE
	R900	30006712	FERRITE BEAD AXI 3.5x4.7x0.8 ROHS	AA	AB
	R901	30006712	FERRITE BEAD AXI 3.5x4.7x0.8 ROHS	AA	AB
	R902	30006712	FERRITE BEAD AXI 3.5x4.7x0.8 ROHS	AA	AB
	R903	30000885	RES MF 1/4W 1.5K J ROHS	AA	AB
	R904	30000885	RES MF 1/4W 1.5K J ROHS	AA	AB
	R905	30000885	RES MF 1/4W 1.5K J ROHS	AA	AB
	R906	30000525	RES CF 1/2W 1.5K J ROHS	AA	AB
	R919	30001212	RES FUSE SAFE 1/2W 1R J RoHS	AA	AA
			MISCELLANEOUS PARTS		
⚠	F801	30031038	FUSE SAFE 2.5A 250V 5*20MM RoHS	AA	AB
	J1		JUMPER WIRE	--	--
	J100		JUMPER WIRE	--	--
	J101		JUMPER WIRE	--	--
	J102		JUMPER WIRE	--	--
	J103		JUMPER WIRE	--	--
	J104		JUMPER WIRE	--	--
	J105		JUMPER WIRE	--	--
	J106		JUMPER WIRE	--	--
	J108		JUMPER WIRE	--	--
	J109		JUMPER WIRE	--	--
	J110		JUMPER WIRE	--	--
	J111		JUMPER WIRE	--	--
	J112		JUMPER WIRE	--	--
	J113		JUMPER WIRE	--	--
	J115		JUMPER WIRE	--	--
	J116		JUMPER WIRE	--	--
	J117		JUMPER WIRE	--	--
	J118		JUMPER WIRE	--	--
	J119		JUMPER WIRE	--	--
	J120		JUMPER WIRE	--	--
	J121		JUMPER WIRE	--	--
	J122		JUMPER WIRE	--	--
	J123		JUMPER WIRE	--	--
	J124		JUMPER WIRE	--	--
	J125		JUMPER WIRE	--	--
	J126		JUMPER WIRE	--	--
	J127		JUMPER WIRE	--	--
	J128		JUMPER WIRE	--	--
	J129		JUMPER WIRE	--	--
	J130		JUMPER WIRE	--	--
	J131		JUMPER WIRE	--	--
	J132		JUMPER WIRE	--	--
	J133		JUMPER WIRE	--	--
	J134		JUMPER WIRE	--	--
	J135		JUMPER WIRE	--	--
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	J142		JUMPER WIRE	--	--
	J143		JUMPER WIRE	--	--
	J144		JUMPER WIRE	--	--
	J145		JUMPER WIRE	--	--
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	J149		JUMPER WIRE	--	--
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	J163		JUMPER WIRE	--	--
	J164		JUMPER WIRE	--	--
	J165		JUMPER WIRE	--	--
	J166		JUMPER WIRE	--	--
	J167		JUMPER WIRE	--	--
	J168		JUMPER WIRE	--	--
	J169		JUMPER WIRE	--	--

	REF No.	PARTS	DESCRIPTION	SN CODE	EX CODE
	J170		JUMPER WIRE	--	--
	J171		JUMPER WIRE	--	--
	J172		JUMPER WIRE	--	--
	J173		JUMPER WIRE	--	--
	J174		JUMPER WIRE	--	--
	J175		JUMPER WIRE	--	--
	J176		JUMPER WIRE	--	--
	J177		JUMPER WIRE	--	--
	J178		JUMPER WIRE	--	--
	J179		JUMPER WIRE	--	--
	J180		JUMPER WIRE	--	--
	J181		JUMPER WIRE	--	--
	J182		JUMPER WIRE	--	--
	J183		JUMPER WIRE	--	--
	J184		JUMPER WIRE	--	--
	J185		JUMPER WIRE	--	--
	J186		JUMPER WIRE	--	--
	J187		JUMPER WIRE	--	--
	J188		JUMPER WIRE	--	--
	J189		JUMPER WIRE	--	--
	J190		JUMPER WIRE	--	--
	J191		JUMPER WIRE	--	--
	J192		JUMPER WIRE	--	--
	J193		JUMPER WIRE	--	--
	J194		JUMPER WIRE	--	--
	J195		JUMPER WIRE	--	--
	J196		JUMPER WIRE	--	--
	J197		JUMPER WIRE	--	--
	J198		JUMPER WIRE	--	--
	J199		JUMPER WIRE	--	--
	J200		JUMPER WIRE	--	--
	J201		JUMPER WIRE	--	--
	J202		JUMPER WIRE	--	--
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	J204		JUMPER WIRE	--	--
	J205		JUMPER WIRE	--	--
	J206		JUMPER WIRE	--	--
	J207		JUMPER WIRE	--	--
	J208		JUMPER WIRE	--	--
	J209		JUMPER WIRE	--	--
	J210		JUMPER WIRE	--	--
	J211		JUMPER WIRE	--	--
	J212		JUMPER WIRE	--	--
	J213		JUMPER WIRE	--	--
	J214		JUMPER WIRE	--	--
	J215		JUMPER WIRE	--	--
	J216		JUMPER WIRE	--	--
	J300	30012985	JUMPER SMD 0603 ROHS	AA	AB
	J301	30012985	JUMPER SMD 0603 ROHS	AA	AB
	J302	30012985	JUMPER SMD 0603 ROHS	AA	AB
	J303	30012985	JUMPER SMD 0603 ROHS	AA	AB
	J304	30012985	JUMPER SMD 0603 ROHS	AA	AB
	J305	30012985	JUMPER SMD 0603 ROHS	AA	AB
	J306	30001734	JUMPER SMD (0805) ROHS	AA	AB
	J307	30012985	JUMPER SMD 0603 ROHS	AA	AB
	J308	30012985	JUMPER SMD 0603 ROHS	AA	AB
	J701		JUMPER WIRE	--	--
	J901		JUMPER WIRE	--	--
	JK1	30027655	JACK RCA 1P WHITE SHARP (AK44) ROHS	AA	AC
	JK2	30027654	JACK RCA 1P YELLOW SHARP (AK44) ROHS	AA	AC
	JK4	30027656	JACK RCA 1P RED SHARP (AK44) ROHS	AA	AC
	PL101	30015053	SOCKET SCART NEW TYPE RoHS	AB	AF
	PL110	30027659	CNAS 2P/150 W/DC SHL BLUE ROHS	AC	AH
	PL115	30002251	CNAS 3P/280 SHL W/DC UL2547AWG24 RoHS	AB	AF
	PL302	30031329	CONN HEADER 2P 2.5MM TOP BLACK RoHS		
	PL405	30013514	CNAS 5P/450 FLT W/DCBLH UL2468 AWG24RoHS	AA	AE
	PL5	30018405	CNAS 2P/250 SHL W/DC UL1533AWG24 RoHS	AB	AF
	PL5	30027418	CONN HEADER 2P 2.5MM SIDE YELLOW SD ROHS	AA	AA
	PL503	30009085	CNAS 1P/350 DIS W/CLIPS RoHS	AA	AC
	PL504	30019101	CABL 1P/350 DIS UL1672AWG22 RoHS	AA	AB
	PL6	30027658	CNAS 2P+3P/300 W/BLK C UL1007AWG24RoHS	AB	AF
⚠	PL903	30031572	SOCKET CRT SAFE NARROWNECK W/GND RoHS	AA	AE
	S102		JUMPER WIRE	--	--
	S104		JUMPER WIRE	--	--
	S105	30012985	JUMPER SMD 0603 ROHS	AA	AB
	S106	30012985	JUMPER SMD 0603 ROHS	AA	AB
	S107	30012985	JUMPER SMD 0603 ROHS	AA	AB
	S405		JUMPER WIRE	--	--
	S410	30012985	JUMPER SMD 0603 ROHS	AA	AB
	S412	30012985	JUMPER SMD 0603 ROHS	AA	AB

	REF No.	PARTS	DESCRIPTION	SN CODE	EX CODE
	S900		JUMPER WIRE	--	--
	SG900	30000428	SPARK GAP 300V ROHS	AB	AG
	SG901	30000428	SPARK GAP 300V ROHS	AB	AG
	SG902	30000428	SPARK GAP 300V ROHS	AB	AG
	SW506	30016022	SWITCH TACT VERTICAL T&R ROHS	AA	AB
	SW507	30016022	SWITCH TACT VERTICAL T&R ROHS	AA	AB
	SW508	30016022	SWITCH TACT VERTICAL T&R ROHS	AA	AB
	SW509	30016022	SWITCH TACT VERTICAL T&R ROHS	AA	AB
	SW510	30016022	SWITCH TACT VERTICAL T&R ROHS	AA	AB
⚠	SW801	30017848	SWITCH SAFE ON/OFF 4A/128A JVC(PAN)RoHS	AC	AH
⚠	TH800	30001268	THERMISTOR SAFE 3P RoHS	AD	AM
		20141200	SNOW BOX ASSY 2163	AN	AZ
		35008844	DOOR METAL SPRING (41x22.5) SHARP	AA	AC
		35008850	METAL WASHER XX6XW (SHARP)	AA	AB
		40016859	RUBBER WASHER 2163RF (I) SHARP	AA	AB
		40016871	DOOR SPACER (M10)	AA	AB
		30027134	SPEAKER 16R 4W F/R 50x120MM-21" SHARP	AF	AR
		35005418	SCREWPCZNYSB3.5x10(KN1031T35X10)RoHS	AA	AA
		40016856	RUBBER BUSHING SHARP	AA	AB
		40016860	BRACKET_SPEAKER 2163RF (I) SHARP	AC	AK
⚠		30028208	POWER CORD SAFE EURO 2.2M SHARP W/F ROHS	AG	AT
		35000014	EARTH SPRING (2CM) ROHS	AA	AB
		20250977	CHS.ASSY.44-512D315132231E(ROHS)	BK	CA
		30016802	RES WW 5W 5.6R J RAD ROHS	AA	AD
⚠		40026379	FIRE BARRIER (I)(NATURAL-V.0) (AK30).		
		35000136	FUSE HOLDER SAFE TK79-A (GRAY)RoHS	AA	AD
		30009366	DIODE UF5402 3A/200V 150A DO201AD RoHS	AB	AF
		35007098	HEATSINK DIODE (U-SHAPE)	AA	AC
		20251720	FRONT2163AV/3H W/H&J M88(P)(PW/S)2SK	AS	BD
⚠		20251722	BACK CVR.2163RF (M88/P)	AU	BF
		20251754	BUTTON ON/OFF 2163RF M88(P) SHARP	AC	AK
		35000013	SPRING ON/OFF SWITCH	AA	AB
		20251756	CONTROL PAN.DOOR 2163RF SHARP M88(P)	AC	AK
		20157329	R/C 1548 SHARP (GRAY/S)	AM	AY
		30002391	BATTERY AAA UM4 1.5V GREEN rohs	AA	AB
		50064728	I/B PAPER SHARP WEEE	AA	AA
		50082343	I/B SHARP 21LF90C(B) AK44/1548/EPHÇSRR	AC	AH
		35005084	SCREW C ZN RYAKB 6x30 RoHS	AA	AB
		35008081	SCREW P C ZN YFMB 3*9.5 RoHS	AA	AA
		35008812	SCREW P C ZN RYSB 3x10 RoHS	AA	AB
		35009300	SCREW P C ZN FYSB 4X16 (D:11) RoHS	AA	AB
		40016817	LOGO SHARP (D.C.-SILVER)21"RF ROHS	AC	AH
		50043894	CONTROL STICKER STREO 2163RF SHARP	AD	AN

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